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5.

apparatus,

secured thereto,

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1. Apparatus for processing articles comprising
movable parts for processing said articles,
a plurality of microcontroller boards secured to said
said microcontroller boards having a plurality of logic chips
secured thereto,
sensors for monitoring operation of said apparatus and
providing input information regarding a plurality of monitored conditions to said
microcontroller boards,
said microcontroller boards being structured to process said
input information and emitting responsive control signals to other said
microcontroller boards and control portions of said apparatus, and

(8) communication means for effecting communication (a) between said sensors and said microcontroller boards, (b) among said microcontroller boards and (c) between said microcontroller boards and control portions of said apparatus, whereby said microcontroller boards will through receipt and processing of said input information for a plurality of monitored conditions and communicating with other said microcontroller boards effect control of a plurality of monitored apparatus conditions.

2. The apparatus of claim 1 including said microcontroller boards having means for emitting control signals responsive to receipt of information from said sensors.

~~3. The apparatus of claim 2 including
said microcontroller boards being secured to a movable or
stationary portion of apparatus or both.~~

4. The apparatus of claim 1 wherein
said processing includes creating said articles from
workpieces.

14. The apparatus of claim 1 including calibration means disposed exteriorly of said microcontroller boards for providing information to said communication means prior to initiating operation of said apparatus.

15. The apparatus of claim 1 including said logic chips being disposed on both surfaces of at least one said microcontroller board.

16. The apparatus of claim 2 including at least one container having at least one said microcontroller board disposed therein, and said container disposed at least partially within a recess in said apparatus.

17. The apparatus of claim 16 including a resinous material encapsulating each said microcontroller board.

18. The apparatus of claim 16 including said containers having only one said microcontroller board therein.

19. The apparatus of claim 16 including said containers having a plurality of said microcontroller boards therein.

20. The apparatus of claim 16 including at least two said containers.

21. The apparatus of claim 20 including at least some of said containers having a plurality of said microprocessor boards.

22. The apparatus of claim 17 including said resinous material being epoxy.

23. The apparatus of claim 4 including said workpieces being metal sheet stock.

24. The apparatus of claim 1 including said processing including handling of pre-formed articles.

25. The apparatus of claim 1 including

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- said processing including inspection of said articles.
26. The apparatus of claim 1 including
said processing includes packaging of said articles.
27. The apparatus of claim 4 including
said articles include at least one article selected from the
group consisting of semi-fabricated products and fabricated products.
28. The apparatus of claim 1 including
a container having at least one said microcontroller board
disposed therein, and
at least one said sensor disposed within said container.
29. The apparatus of claim 28 including
a plurality of said microcontroller boards disposed within said
container.
30. The apparatus of claim 28 including
said container secured to said apparatus.
31. The apparatus of claim 28 including
said container disposed within a recess within said apparatus.
32. The apparatus of claim 1 including
said apparatus being portable apparatus.
33. The apparatus of claim 1 including
a plurality of microprocessor modules each containing a
plurality of said microcontroller boards and being operatively associated with at
least some said sensors and at least a portion of said communication means.
34. The apparatus of claim 33 including
said microprocessor modules being secured to different
portions of said apparatus and at least some of them being structured to perform
different functions than others of said microprocessor boards.
35. A method of processing articles comprising
providing an apparatus having cooperating movable parts for
processing said articles,

providing a plurality of microcontroller boards each having a plurality of logic chips secured to said apparatus,

sensing certain conditions of said apparatus or said articles and delivering input information regarding a plurality of monitored conditions from said sensors to said microcontroller boards, and

responsive to receipt of said input information from said sensors, said microcontroller boards processing said input information and emitting
 5 responsive control signals from said microcontroller boards to other said microcontroller boards and portions of said apparatus to control operation of said apparatus, whereby said microcontroller boards processing of said input information for a plurality of monitored conditions and communicating with other said microcontroller boards effect control of a plurality of monitored apparatus conditions.

36. The method of claim 35 including
 employing a plurality of said microcontroller boards.

37. The method of claim 36 including
 providing said microcontroller boards in a recess in said
 apparatus.

38. The method of claim 36 including
 displaying visually readable information regarding specific
 conditions of said apparatus.

39. The method of claim 35 including
 employing as a microprocessor module a container having at
 least one said microcontroller board disposed therein, and serving said container to
 said apparatus.

40. The method of claim 39 including
 encapsulating said microcontroller boards with a resinous
 material.

41. The method of claim 39 including
 employing only one said microcontroller board in each said
 container.

42. The method of claim 39 including

employing at least some of said microprocessor board and sensor containers to perform different functions than others.

55. The method of claim 54 including securing said containers to said apparatus.
56. The method of claim 55 including at least some of said containers being secured within recesses in said apparatus.
57. The method of claim 35 including employing portable apparatus as said apparatus.
58. The method of claim 35 including said processing including transport of said articles.
59. The method of claim 35 including said processing including at least one segment involved in an industrial manufacturing process.
60. The method of claim 35 including employing at least one actuator responsive to said control signals from said microcontroller serving to alter a condition of said apparatus.
61. The method of claim 39 including a said microprocessor module being operatively associated with a plurality of said sensors
62. The method of claim 39 including a said microprocessor module being operatively associated with a plurality of actuators for altering said apparatus or said article responsive to control signals received from said microprocessor module.
63. The method of claim 35 including employing as said articles at least one item selected from the group consisting of semi-fabricated or fabricated articles.
64. The method of claim 35 including said processing including counting of said articles.